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EXAMINER

YOCKEY, DAVID F

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/773,054

Applicant(s)

ECKARD ET AL.

Examiner

David Yockey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 230B3 (p. 13, line 21); 230D4 (p. 14, line 19); 70B (p. 15, line 1)

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 230C4 (Fig. 9).

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: use of the term "underware" at page 13, line 7 as a synonym for software is repugnant to the ordinary meaning of the term and should be deleted therefrom.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-12 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11-12:

In each of the claims, "the second printhead cleaner" lacks antecedent basis.

Claim 20:

"the set of printer instruction code" lacks antecedent basis (claim 20 apparently should upon claim 19).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 13, 15, 17, 26 and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Nguyen et al. (US 5,638,099).

Nguyen et al. teaches:

\* identifying a printhead-related service condition not adequately addressed by servicing the printer with the first module (wiping not adequately addressed due to wiper(s) on a sled wearing out; column 3, lines 63-67),

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\* providing a second module with a function different from the first module and adapted to address the printhead-related service condition (provision of replacement sled, thereby providing a new wiper or wipers to address the wiping condition; column 3, lines 63-67; with respect to claim 30, as no particular limitation to the "special service function" is defined, the different wiper function of a new wiper is deemed to be "special" with respect to the wiping function of a worn-out wiper),

\* providing the second module to the printer user (user replaces the sled; column 3, lines 63-67; therefore, the module must be provided to the user),

\* installing the second module (replacement of sled; column 3, lines 63-67),

\* conducting a printhead-related service operation using the second module (implicit in the replacement, as the clear intent is to use the newly replaced sled after replacement thereof),

\* printhead-related service condition includes global depriming of the printhead or ink starvation thereof, and the second module includes a negative pressure primer (anticipated by indication of priming, particularly at column 1, lines 27-35),

\* printhead-related service condition includes vibration or shock incurred during shipment or moving of the printer, and the second service module includes a special capping structure having a range of movement along an axis generally transverse to a nozzle array of the printhead and a bias structure which urges the capping structure toward and into engagement with the printhead during a capping procedure (capping after printing is disclosed at column 2, lines 40-44, with cap and

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bias structure being clearly disclosed; a replacement sled, which includes a cap moved as claimed, addresses the claimed condition; it is noted that there is no particular definition of what constitutes a "special capping structure"),

- \* a printhead (611),
- \* service area (location of service station 110 in Fig. 1),
- \* first service module (an old sled),
- \* second service module (a new sled),
- \* a printhead carriage (320), and
- \* a service carriage (302).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-4, 9, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099).

Nguyen et al. teaches the claimed invention except providing a set of instructions for using the second service module with the ink jet printer to the printer user. Removal of the first module and installation of the second module are clearly taught at column 3, lines 63-67.

The Examiner takes Official Notice that it was notoriously old, well known, and conventional at the time the invention was made to provide a set of human-readable instructions for using a replaceable component with a printer to a user with the replaceable component and for the user to use the instructions in order to instruct the user on use of the component. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a set of human-readable instructions for using the second service module with the ink jet printer to the printer user, and for the user to use the instructions, because such provision would insure that the user is instructed on how to use the component.

Claims 5-6, 11, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Johnson et al. (US 6,135,585).

Nguyen et al. teaches the claimed invention except using the second module to conduct a special printhead-related servicing operation, removing the second module and installing the first module after completion of the special operation, and the service condition including ink accumulation on the nozzle plate, and the second printhead cleaner includes a wiper or applicator having applied thereto a cleaning fluid for removing the ink accumulation.

Johnson et al. discloses provision of a service module having an optional solvent applicator in addition to a wiper and cap (see Abstract), thereby suggesting provision of servicing modules having different cleaning functions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide remove the module (sled) in Nguyen et al. and provide and use a second module which performs a special printhead-related servicing operation, such as solvent application, in response to ink accumulation on the nozzle plate because the provision of the second module would facilitate performing the special servicing, such as dissolving ink residue on the printhead, including the nozzle plate, as taught by Johnson et al. (column 11, lines 41-67), thereby improving print quality.

With regard to removing the second module and installing the first module after completion of the special operation, it is clear that modules in Nguyen et al. may be exchanged at any desired time. As there are no unexpected results in the removal of the second module and installation of the first module after completion of the special operation, it would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the second module and installing the first module after



completion of the special operation at any desired time, such as when the special operation is no longer deemed to be required or at a time the second module no longer functions, because such removal and installation would facilitate operation of the Nguyen et al. apparatus in a desired manner.

Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) as applied to claims 3 and 18 above, and further in view of Childers et al. (US 6,126,265).

Nguyen et al. teaches the claimed invention except providing a set of machine readable printer instruction code.

Childers et al. discloses providing a set of machine readable printer instruction code for loading into the printer (service station control procedures as part of printer firmware) in order to control service station operation (column 6, lines 24-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a set of machine readable printer instruction code for loading into the printer in combination with Nguyen et al. to facilitate control of the service station therein.

Claims 8 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Childers et al. (US 6,126,265) as applied to claims 3, 7, and 18-19 above, and further in view of Russell et al. (US 5,623,604).

The combination of Nguyen et al. and Childers et al. teaches the claimed invention except downloading the set of printer instruction code from the host computer.

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Russell et al. teaches downloading a set of printer instruction code from a host computer to avoid need for returning the printer to the manufacturer or having a manufacturer's representative visit a customer site to alter printer instruction code as required (see column 1, lines 10-20; column 1, line 61 through column 2, line 16; and column 2, lines 30-62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to downloading a set of printer instruction code from a host computer in Nguyen et al. because such downloading would avoid need for returning the printer to the manufacturer or having a manufacturer's representative visit a customer site to alter printer instruction code as required.

Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Johnson et al. (US 6,135,585) and Miller (US 4,340,897).

Nguyen et al. teaches the claimed invention except the service condition comprising fibers accumulating on the printhead nozzle plate and the second service module including a brush to remove fibers.

Johnson et al. discloses provision of a service module having an optional solvent applicator in addition to a wiper and cap (see Abstract), thereby suggesting provision of servicing modules having different cleaning functions. Further, Miller discloses a nozzle plate cleaner including brush which removes solid particles therefrom (Fig. 1; column 2, lines 48-51).

It would be obvious to one of ordinary skill in the art at the time the invention was made to provide a second service module including a brush in response to fibers accumulating on the printhead nozzle plate in Nguyen et al. because the provision thereof would facilitate removing solid particles, including fibers, from the nozzle plate, thereby improving print quality.

Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Johnson et al. (US 6,135,585) and Terasawa et al. (US 4,951,066).

Nguyen et al. teaches the claimed invention except the service condition including ink accumulation on the nozzle plate, and the second printhead cleaner includes a wiper.

Johnson et al. discloses provision of a service module having an optional solvent applicator in addition to a wiper and cap (see Abstract), thereby suggesting provision of servicing modules having different cleaning functions. Further, Terasawa et al. teaches a wiper made of textile (11C made of unwoven fabric; column 7, lines 51-57) for removing accumulated ink from a nozzle plate, the wiper being provided in addition to a cap and blade-type wiper to enable always providing stable ink discharge easily and reliably (column 8, lines 35-39).

It would be obvious to one of ordinary skill in the art at the time the invention was made to provide a second service module including a textile wiper in addition to a cap and blade-type wiper in response to ink accumulation on the nozzle plate in Nguyen

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et al. because the provision thereof would enable always providing stable ink discharge easily and reliably.

Claims 14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Shibata (US 5,589,861).

Nguyen et al. teaches the claimed invention except service condition including ink on a printhead interconnect and the second service module including a brush arranged to clean the interconnect.

Shibata discloses a service module (600 in Fig. 7) including a brush (618) arranged to clean the printhead interconnect. It would be obvious to one of ordinary skill in the art at the time the invention was made to provide the Shibata service module in response to a condition of ink on a printhead interconnect in Nguyen et al. because the provision thereof would enable cleaning of the printhead interconnect, thereby improving printer operation.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nguyen et al. (US 5,638,099) in view of Nystrom et al. (US 5,530,463).

Nguyen et al. teaches the claimed invention except the special capping structure including a relatively hard, non-resilient cap structure which contacts the printhead during the capping procedure.

Nystrom et al. discloses use of a relatively hard, non-resilient cap structure which contacts a printhead during a capping procedure which will not collapse under pressure

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developed during a priming or maintenance operation (column 6, lines 4-19). It would be obvious to one of ordinary skill in the art at the time the invention was made to provide the cap of the second module as a relatively hard, non-resilient cap structure because such provision would prevent the cap from collapsing under pressure developed during a priming or maintenance operation.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Yockey whose telephone number is (703) 308-3084. The examiner can normally be reached on weekdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
**DAVID F. YOCKEY**  
**PRIMARY EXAMINER**

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March 24, 2002